DOCUMENT RESUME

ED 061 069 SE 013 416

TITLE Studies in Family Planning, Volume 3 Number 2.
INSTITUTION Population Council, New York, N.Y.
PUB DATE Feb 72
NOTE 12p.
AVAILABLE FROM The Population Council, 245 Park Avenue, New York, New York 10017 (Free)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Behavioral Science Research; Contraception; Demography; *Family Planning; *Foreign Countries; Human Services; *Programs; *Reports; Social Sciences; Statistical Data

ABSTRACT

A new design for government family planning programs is proposed in "Family Planning Programs: An Economic Approach," the principal article in this monthly publication of The Population Council. The design is intended primarily for low-income countries that seek large and rapid reductions in fertility. Thirteen elements of the proposed system of incentives and services are listed, with particular emphasis on monetary payments to women who avoid births or pregnancies. Provision of services; client and service unit personnel incentives; follow-up care; training, education, and communication; research, evaluation, and reporting; and cost-benefit estimates are described. Also included in the paper are two additional reports: "Village Midwives in Malaysia" and "Report of the Swedish Abortion Committee." The first presents the results of an informal questionnaire administered to village midwives in Malaysia recruited for a training program to provide health services in remote areas. The second is a brief review of the Swedish position on legalized induced abortion over the past three decades and a summary of the recommendations made by the 1965 Committee on Abortion. (BL)

ED 061069

Studies in Family Planning

A PUBLICATION OF THE POPULATION COUNCIL

Volume 3, Number 2 *February 1972*

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Family Planning Programs: An Economic Approach

by ISMAIL SIRAGELDIN *and* SAMUEL HOPKINS

This paper proposes a new design for government family planning programs. The design is intended particularly for low-income countries that seek large and rapid reductions in fertility. The authors, Ismail Sirageldin, Ph.D., and Samuel B. Hopkins, J.D., M.P.H., were formerly chief advisor and associate advisor, respectively, at the West Pakistan Research and Evaluation Center, Lahore, Pakistan. This center conducts training, research, and evaluation for the Pakistan Family Planning Program. The authors are now in the Department of Population Dynamics, Johns Hopkins University, School of Hygiene and Public Health. Dr. Sirageldin, an economist, is also on the faculty of the Department of Political Economy at the same university.

This paper has evolved in large part from the authors' experience in Pakistan. The authors express their appreciation to all their Pakistani colleagues who contributed to this experience. Thanks also go to the many persons who gave the authors comments on earlier drafts of this paper, beginning in April 1969. Special thanks for comments that influenced the redrafting go to: Bernard Berelson, Parker Mauldin, and Lee Bean of the Population Council; Tom Croley and Lyle Saunders of the Ford Foundation; Paul Harper, Rowland Rider, John Kantner, and Melvin Zelnik of Johns Hopkins University; Sultan Hashmi of ECAFE, Bangkok; Quentin Lindsey of the University of North Carolina; and Robert Bush and Willard Boynton, of the United States Agency for International Development.

The authors assume full responsibility for views expressed in this paper.

"A journey of a thousand miles must begin with a single step."——an old Chinese proverb.

". . . It may take another journey of a thousand miles to begin that first step in the right direction."——an advisor in population planning.

There is general agreement among economic and social planners that human fertility must be reduced. About 81 percent of the people in the developing world live in nations whose governments have policies favorable to family planning or at least provide funds that go into family planning efforts (Nortman, 1971). Also, in many developed nations contraceptives and often other family planning services are accessible to much of the population. However, the present overall decline in fertility falls far short of what is necessary. Furthermore, the authors feel that the future fertility decline will also fall far short, unless better systems for contraceptive services, including incentives, are de-

TABLE OF CONTENTS

Family Planning Programs: An Economic Approach 17
Ismail Sirageldin and Samuel Hopkins

Village Midwives in Malaysia 25
J. Y. Peng, Nor Laily bte A. Bakar, and Ariffin Bin Marzuki

Report of the Swedish Abortion Committee 28
Christopher Tietze

© THE POPULATION COUNCIL, INC., 1972

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Hobart Ellis Population Council TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

SE 013 416

veloped. Systems vary among different family planning programs, and new systems are being continually proposed. This paper proposes still another system, and we feel that a pilot trial will prove it effective. (For a comprehensive review of proposals made before 1969 of new ways to reduce fertility, see Berelson [1969a; 1969b; and 1969c]. For subsequent proposals, see Ridker [1969; 1971], Finnigan [1972], Kangas [1970], and Pohlman [1971].)

Summary of the Economic Approach

The important elements of the proposed system are listed below. Some of these elements have been proposed before by others. In particular, monetary payments to women who avoid births or pregnancies have been proposed by Enke (1960), Balfour (1962), Leasure (1967), Spengler (1967), Mauldin (1967), Ehrlich (1968), Simon (1968), and Ridker (1969; 1971). One basic difference between the payments proposed in their reports and the payments proposed in this paper is that, in general, the payments proposed here begin sooner after enrollment and are more frequent thereafter. In its details and its combination of elements this proposal is relatively unique.

1. Cash incentive payments are made to eligible women who enroll in the proposed incentive scheme and who avoid having births, regardless of the methods they use, within the limits of social and political acceptability. These women are called clients.

2. The cash payments to clients encourage more use and more effective use of traditional as well as modern contraceptives.

3. Eligible women are women who are married and less than age 40 and who have one or more living children. There is no limit on how many children a woman can have before her first enrollment.

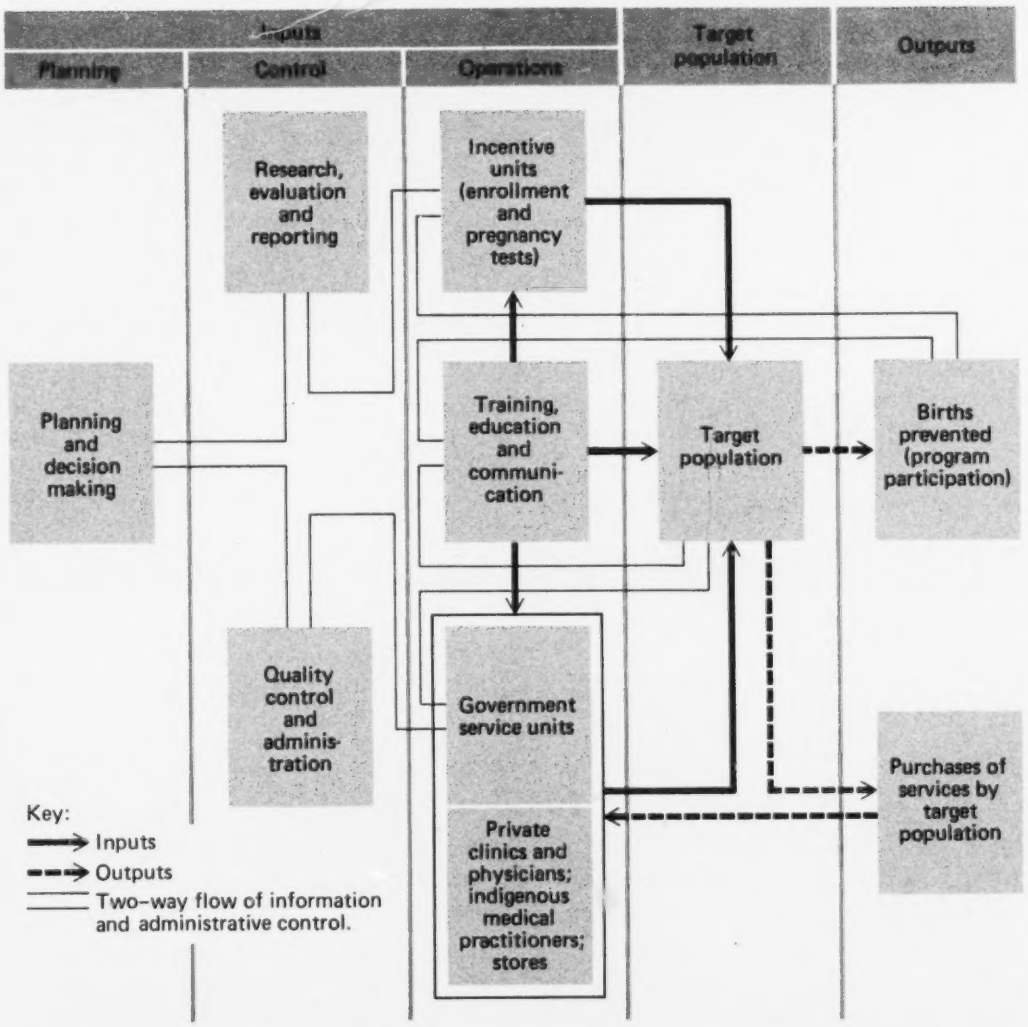
4. The avoidance of births is determined by periodic superficial examinations for pregnancy. The examinations do not attempt to detect pregnancies of less than four or five months' duration. Insofar as a client can establish that any detected pregnancy does not end in a live birth, she remains enrolled and eligible for cash payments.

5. The schedule of cash payments is the same for all clients.

6. Payments to clients begin four months after enrollment, and are made every four or more months thereafter.

7. Payments to clients increase in size with length of enrollment.

FIGURE 1. *Schematic Presentation of the System*



8. Payments to clients provide money to pay for family planning and maternal and child health services.

9. During the first four months of enrollment, clients and clients' husbands receive free family planning services in government clinics. Otherwise, the government services are provided to clients and nonclients at fixed prices. The prices of services and client incentives are set at levels that require the average client to use only a small fraction of her incentive payments to purchase such services as IUD follow-up, conventional contraceptives, or pills.

10. Preventive maternal and child health (MCH) services are provided in government clinics at low prices for anyone in the population, except that these services are free for a client and her children during the first four months after her enrollment.

11. Government clinic personnel receive part of their sales receipts as an incentive. A time lag is introduced, however, between sales receipts and incentive payments (commissions) to personnel, to allow checks on false reporting.

12. A system of reporting and evaluation provides guidelines for short- and long-term policy actions, including estimates of births prevented and system costs.

13. The system increases the market and demand for family planning services and supplies in the private sector by combining cash payments for nonbirths, regardless of method of birth prevention, with charges for family planning services in government clinics.

14. The system allows for "fiscal flexibility." The government subsidy of the program can be reduced or raised through manipulation of the prices of contraceptives and the level of clients' incentives.

The system is summarized in a flow chart in Figure 1. The solid arrows give the paths of the system's inputs such as incentive payments, family planning services, training, and educational activities. The broken arrows indicate the system's outputs. The outputs are births prevented and sales of family planning services. The flow channels indicated by thin lines show the interrelations between all parts of the system with respect to administrative control, research, evaluation, reporting, and two-way communication.

Our proposal is made with the intention that it will first be tested in pilot areas and

that many of the details presented here will be modified before implementation on a larger scale. The authors have prepared a detailed proposal for a pilot trial of this system in Pakistan. The proposed duration of the trial is four years. The proposed target population is 100,000. The proposal may be obtained on request.

Countries for Which the System is Most Suitable

Our system is designed for countries like Pakistan and India that have both relatively low per capita incomes and ambitious fertility reduction goals. Other systems should be more efficient in other countries. Countries with high per capita incomes can alter certain of their existing systems, like taxation systems (Barnet, 1969), without having to create a new incentive system, and in high income countries, where most adults pay substantial taxes, the distinction made in our system between "free" and "charged for" government services is probably unimportant. Countries with very modest goals for fertility reduction probably can achieve these goals without the incentive system proposed here, *provided* that they can substantially increase the availability and attractiveness of contraceptive services. On the other hand, achieving these modest goals will *not* be enough, in most cases, to achieve the necessary reduction in fertility.

Provision of Services

Premises

It is one of the authors' premises that charging prices for family planning services can improve continuation rates among family planning acceptors. (In addition, charging prices may indirectly and in the long run improve acceptance rates. However, for increasing acceptance rates the proposed system relies primarily on client incentives.) A person who decides to pay for a service must have thought about it and its utility more seriously than a person who is getting the same service free. The cost of not using or misusing a service is necessarily higher for those who have paid for it than for those who have received it free, because the cost of a purchased item includes the foregone utility of those goods and services (including the foregone pleasure of saving) that could have been bought and consumed instead. We are assuming that the cost of time spent in acquiring and consuming these goods and services is the same whether they are provided free or not. Also, we are assuming that no utility or pleasure is acquired from destroying free goods or services.

Another premise is that setting a target for new acceptors while services are provided free encourages poor quality of service and false reporting.

Plan for Services

In the proposed system, services will be provided by both the public and private sectors. In the public sector preventive MCH services are provided in government service units (clinics). Family planning services include any method of birth prevention that the government will authorize, such as IUD insertion, sterilization, and oral and conventional contraceptives. The services also cover related follow-up care, including counselling and dispensing of aspirin and vitamins for side effects. For treatment of serious side effects or for relatively difficult new services, such as a new method of vasectomy, patients are referred to special service units or other sources of medical services—hospitals and private practitioners. MCH services include prenatal and postnatal maternal care, immunizations, and health education. (Combining family planning services with health services in the same program service unit does not imply that a family planning program should be administered by the health department or vice versa. There is a limit, however, to the extent to which diversification is advisable and feasible. Provision of additional services will require more resources and personnel. The added social cost has to be measured against the added social benefit including the added value of any increase in births prevented.)

The prices of the various services are fixed by the planning unit and are subject to change. The prices depend on demand situations (for example, participation rates relative to anticipated targets), on cost considerations, and on the extent of government subsidy. The price structure also may reflect the planners' preference for promoting one or another family planning method.

The one exception to charging prices is for women who have recently enrolled in the incentive scheme. Clients and their husbands and children receive free services during the first four months of the clients' enrollment. Reasons for this are: (1) The clients have not yet received their first incentive payment. (2) An initial period of free service encourages service unit personnel to give emphasis to follow-up care. (3) Free service for a limited time encourages clients to accept some services at least on a trial basis.

Each service unit serves a target population in a limited geographical area. It is proposed that service units have not only adequate equipment, facilities, and trained personnel but also accommodations for medical and paramedical staff, especially in rural areas where it is difficult to find adequate private accommodation within reasonable traveling distances. Because of the shortage of medical personnel in developing nations, one medical doctor supervises several service units, and paramedical personnel are used extensively. Thus, for the most part, only those MCH services that can be performed by paramedical personnel are provided in the service units.*

MCH and family planning services provided by the private sector are also considered part of the system, because the system should have important effects on the demand for and supply of these services. The system will provide education, training, information, and other support and concessions that will help develop the private sector's role in providing services.

Client Incentives

Premises

It is the authors' premise that small but immediate incentive payments or rewards for nonbirths can create a strong demand for family planning services. Immediate payments should have a great impact in a developing society where the time horizon is short, and regular payments should have a reinforcement effect on client participation.

Another premise is that monetary incentives for nonbirths, regardless of the method used, combined with charges for family planning services in government clinics, will increase the market for and supply of family planning services in the private sector.

---

* The child care incentive might be administered with the cooperation and assistance of certain other welfare programs. The most obvious possibility is the UNICEF program. But any program that, for example, promotes better nutrition would be suitable. Ruben Rausing has recently proposed a nutrition program to the International Bank for Reconstruction. The program would use the milk protein and edible oil surpluses of developed nations, and Mr. Rausing describes some ways that the milk distribution might promote family planning. (The proposal is dated February 1969 and has no title.)

The Incentive Unit

An incentive unit is responsible for enrolling clients in a limited geographical area, checking pregnancy status, paying incentives, keeping records, and reporting to the control and planning units (see Figure 1). Although there are good reasons to separate the incentive and service units, we propose an economical administrative set-up in which the incentive and service units are located in the same building, which has a designation like "Family Health and Welfare Center." Pregnancy checks are made by service unit paramedical staff. The incentive unit staff administer incentive payments and verify the identity of clients. The main staff of the incentive unit are a motivator and an assistant. This administrative pattern has several advantages. It should reduce the overhead cost. Also, since the client can come to the same building for MCH and family planning services as for incentive payments, the client can keep her enrollment private and can save time. Combining the units may increase the probability of collusion between personnel of the two units, but certain administrative measures, such as relatively frequent shifting of personnel from one location to another, should keep the collusion under control.

Eligibility Criteria

Eligibility criteria should vary according to the norms, needs, and experience with the system. In general, conditions for accepting clients into an incentive program, aside from administrative, political, and economic feasibility, can be designed to enhance client acceptance, discourage intermittent enrollment, and screen out sterile women or women with low expected fertility. The proposed eligibility criteria are that a woman must:

1. Be married.
2. Have at least one living child.
3. Be less than 40 years of age.
4. Not have discontinued enrollment for more than two years or, if the discontinuation was for less than two years, not have discontinued more than twice. Discontinuation is defined as a gap of more than four months between examinations that reveal no pregnancy.

The marital and parity status criteria could be relaxed depending on prevailing norms and needs; for example, the marital status condition may be relaxed in a society where illegitimate births are a problem that the society is willing to deal with directly. It should be emphasized that restricting clients to women is not designed to discourage male methods of birth control. It is only an administrative convenience. Sterilization and contraception could be subsidized to varying degrees for clients' husbands as well as for clients, depending on the desire of the program planners to promote one or another method.

Criteria *2* and *3* serve to screen out women with low expected fertility. Given criterion *1*, the system does not encourage promiscuity. Criterion *4* allows a woman to have two births (with few exceptions) after her first enrollment in the program without losing her eligibility for re-enrollment. In a high fertility population this limitation provides for more restriction on expected fertility than may appear on first impression. Take, for example, the Pakistan population of married females, age 15–39 with one or more living children. Using PGE data* for the period 1962–1965 and PGE assumptions about fertility change, about the percent of the population that has living children, and about the percent of total births that are to women with living children, it is possible to estimate that the average number of live births per female was about four at any time during the 1962–1965 period. It has also been estimated that these females would, on the average, have about four additional live births before reaching age 40. (These estimates are admittedly very approximate, because their calculation required somewhat arbitrary assumptions to adjust the data used. Accordingly, the estimates are rounded off to the nearest whole birth.) Thus, if this system were introduced into such a population, the immediate reasonable target would be a 25 percent reduction in the average completed number of live births (six instead of eight), assuming that the clients were representative of the total female population at risk of pregnancy. Furthermore, the longer the program is in operation, the higher is the proportion of eligible women who could have enrolled after having only one child. Therefore, the completed fertility target in Pakistan could approach three instead of six live births per woman.

* PGE (the Population Growth Estimation Project) collected vital events data by registration and survey procedures during 1962–1965 in sample areas in Pakistan. PGE reported two estimates for most data. The high estimates were used in this paper. The source used was William Seltzer (1968).

Pregnancy Tests

Women will receive only superficial physical examinations by paramedical personnel to detect pregnancies of four or more months duration. Medical personnel are called upon only if there is disagreement between the client and the paramedical staff. In these cases, clients may be asked to return after one or two months when the pregnancy, if any, will be more apparent. (For a discussion of pregnancy tests, see Cabrera [1969].)

Cash Incentives

The expected benefit of keeping a woman from having a birth during a year depends on the probability that the woman will have a live birth during the year. It is tempting to suggest that there should be differential payments based on the different probabilities. We think, however, that the administrative cost of such selective payments is greater than the expected benefit and that the social cost, for example, clients' resentment, may also be large. We propose to pay, at least initially, the same amount of incentives to all clients for the same period of enrollment. However, estimates of differential probabilities both for the population at large and for system clients are essential for adequate evaluation and planning.

Incentive payments increase with length of enrollment. Payments are scaled to give both frequent rewards for continuing enrollment and penalties for intermittent enrollment. Part of the total annual payment is given in triannual installments, and part is given as an end-of-the-year bonus. Moreover, the total annual payment is smaller in the first year of continuous enrollment than in the second year and smaller in the second year than in subsequent years. The proposed payments per four-month period of continuous enrollment for a country like Pakistan or India are as follows:

Period	*Payment (at end of period)*
1 (months 1–4)	$0.80
2 (months 5–8)	1.60
3+ (months 9 plus)	2.00

Amounts are expressed in U.S. dollars for illustration only. Payments are made in local currency.

When period payments are supplemented by end-of-the-year bonuses and

when a client's enrollment is continuous, the total payments per year are as follows:

Year	*Period payments*	*End of year bonus*	*Total*[a]
1	$4.40	$2.60	$7.00
2	6.00	3.50	9.50
3+	6.00	5.00	11.00

[a] Based on per capita national income comparisons, the value of one dollar in Pakistan or India is roughly equivalent to the value of about $40 in the USA. Thus, the $11.00 annual incentive payment suggested in the text is equivalent to the payment of about $400 in the USA. This comparison was suggested by Richard Reynolds, Ford Foundation, Pakistan.

After any period of discontinuation, if a woman is still eligible to re-enroll and does re-enroll, she must begin again at the bottom of the incentive scale.

It must be emphasized that these payments, although reasonable for a country like Pakistan or India, are only a starting point for a pilot project designed to estimate clients' responses to different types of incentive payments and different payment scales.

Procedure for Paying Incentives

Payments are made once every four months. As mentioned earlier, a client is asked to come to the incentive unit at least once every four months for a pregnancy check. At this time she will receive her period payment if she is still eligible. The visits every four months are not so frequent as to be a burden on clients but are still frequent enough to detect pregnancies by superficial examination.

Alternatives to immediate payments and cash payments may be tested. In countries where post offices function as savings banks and in areas of these countries where post offices are reasonably accessible, one alternative would be to make payments with nontransferable coupons equivalent to cash only when deposited in a post office savings account which the client could use only for deposit of these coupons. Delays in payment could then be effected by requiring minimum balances before or after withdrawals. This alternative would have the added value of encouraging saving.

Incentives for Service Unit Personnel

Premise

Another premise of this system is that incentives for personnel can be designed to improve the quality of services as well as the quantity. In particular, the premise is that clinic personnel will be motivated to give better quality of service and more service if:

1. They have adequate training and facilities.
2. They retain part of their clinic's gross receipts as incentives.
3. These incentives are earned not from initial service to clients but mainly from follow-up service.

Plan for Incentives

Service unit personnel receive a portion of their unit's gross earnings from sales of family planning services. The payments are made at the end of the year after the usual accounting and inventory check. It is proposed that initially the portion be 50 percent, subject to adjustment by the planning unit, depending on field experience.

Follow-up

The system is uniquely suited to achieving good follow-up care of women who adopt contraception. The pregnancy checks of clients at four-month intervals provide an ideal opportunity for follow-up care, and the incentives for service unit personnel encourage them to persuade clients to return for follow-up.

The system also includes follow-up in the field of at least a sample of the following types of eligible women to determine their reasons for not being enrolled: women who have terminated their enrollment by being overdue for a pregnancy check; women who have previously obtained family planning and/or MCH services at service units but who have not enrolled; and women who have never either enrolled or visited service units.

Training, Education, and Communication

In-service training is often ineffective because, among other problems, there is lack of interest among the trainees. Under our system, personnel should show more interest in in-service training. In this system personnel incentives must come from the client's rather than from government's pocket; therefore, personnel must give better service in order to attract the same number of clients as before.

Part of the function of the service unit personnel is to explain the system of incentives and services to the target population, as well as to motivate this population to enroll. Also, incentive unit personnel enumerate households in their designated areas, and keep records on every household. Such enumeration helps the planning and execution of motivation and education programs.

Research, Evaluation, and Reporting

Inputs

Data on inputs are continuously gathered and include data on expenditures on, and utilization of, such items as incentive payments, contraceptives, other medical supplies, personnel, transport, and advertising. The purpose is to obtain a continuous picture of the system's cost by type of input.

Outputs

The primary purpose of the output research, evaluation, and reporting is the estimation of how many births the system prevents. Births prevented are the *final* output. There is also, however, assessment of what may be called *intermediate* output. This output includes the number of clients, the proportion of all eligible women who are clients, and the rates of continuation of enrollment and contraceptive use. The assessment of this output will include analysis of the numbers, proportions, and continuation rates by demographic and other characteristics of the women and analysis of how these output variables change over time. This assessment of intermediate output may indicate, for example, that the system is not effectively reaching, enrolling, and retaining women of low age and parity. As a result, there may be experimentation with new techniques of education, publicity, and motivation. At the same time there may be revision of the incentive design. Women under age 30 with one or two children might be offered double the monetary incentives offered to other clients.

Intermediate output data are gathered by enumeration of the target population and by the incentive unit reporting procedure. The incentive unit reports each initial and follow-up visit on a simple record form. (An initial visit is either a first enrollment or a re-enrollment after a period of nonparticipation, which requires, as noted earlier, that the client begin again at the bottom of the incentive scale. More details about the reporting system, specific to Pakistan, are given in the authors' project proposal for a pilot trial in Pakistan.) For each initial visit the record form reports the usual background data, including age, parity, open interval, and method that the woman is using or

plans to use to prevent pregnancy. For each repeat visit, the form reports the months of continuous participation and the method, if any, being used. These data are sent to the research and evaluation unit.

The estimation of final output (births prevented) requires fertility rates for the target population, in addition to the above intermediate output data. Fertility rates will be estimated by surveys and/or sample registration. These methods have been tried in Pakistan with some success (Naseem, 1971; Mosley, 1968).

The estimate of births prevented during a given period is related to incentives paid and other costs incurred during a period of the same duration but ending nine months earlier. Cost per birth prevented is calculated both for total clients and for client subgroups.

In addition, as noted earlier, attention is given to the eligible women who terminate enrollment or who have never enrolled. Sample surveys of these women evaluate reasons for nonenrollment.

Cost-Benefit Estimates

Need for Estimates

Is the system proposed in this paper more economical (in terms of cost benefit criteria) than other family planning systems and other alternative investments? Could a typical developing country afford such a system both in the short and the long run? What are the social costs and benefits of introducing such a system, and are they quantifiable and measurable? These are some of the questions that need to be at least partially answered before the proposed system can be recommended for implementation on a large scale. Many of these questions, however, cannot be answered *a priori*. Rather, pilot trials are necessary. (For a recent review of the literature relevant to cost-benefit analysis, of family planning programs, see Robinson and Horlacher [1971]); for estimates of the cost-effectiveness of six national family planning programs, see Department of Economics, Pennsylvania State University [1969].)

Preliminary Cost-Benefit Estimates for Determining a Feasible Level for Client Incentives

The following estimates are for Pakistan.

Cost: We estimate that the incentives proposed earlier (pp. 20–21) and the other cost elements of our system will be sufficient to prevent many births but yet moderate enough to keep the cost of preventing each birth in the range of US$85 to $110 on the average.

Benefit: Using the increase in per capita GNP as the measure of benefit, a conservative estimate of the benefit derived from preventing each birth is $180 on the average.* (This estimate is for a magnitude of fertility reduction in the range of 20–50 percent. Also, note that $180 is the *present* value of the benefit. The benefit is spread out over future years in the form of higher per capita GNP, unlike the cost which is incurred immediately. The future benefits must be discounted to arrive at an estimate of benefit that can be meaningfully compared to the estimate of cost [Robinson, 1971]).

Rate of return: Comparing the above estimates of benefit and cost permits the calculation of a rate of return on the money invested in the proposed system. If $85 must be invested per birth prevented, the net benefit is $95, that is, $180 − $85, and the rate of return is about 112 percent, that is, ($95/$85) × 100. Similarly, if $110 must be invested per birth prevented, the net benefit is $70, and the rate of return is about 64 percent. These rates of return are clearly higher than those from alternative investments designed to increase GNP. (Alternative returns are probably less than 30 percent.)

Feasible levels for client incentives: Given the difference between the rates of return from the proposed system and from alternative investments, we conclude that the proposed level of client incentives, as well as other system costs, are well below the maximum we could justify. This permits experimentation with raising, as well as lowering, the incentives and other inputs.

Other benefits: The above estimate of benefit does not include several kinds of benefits which the system is likely to produce—for example, improvements in maternal and child health, in child development, and in other welfare variables related to birth spacing, limitation, and smaller family size.

Assumptions behind the cost estimates: The cost estimates for the proposed scheme are not minimum estimates. They provide for some wastage and inefficiency. For example, they assume that a significant portion of the women who enroll in the incentive payment scheme will not actually try to prevent pregnancies. The estimates also allow for higher costs for supplies, personnel, and transportation per unit of target population than there are in the present Pakistan program. On the other hand, it is assumed that the system will operate at a higher percent of capacity than the present Pakistan program.

Discussion

Problems of Measurement

Many of the difficulties of evaluating family planning programs have been well documented. (For a recent, comprehensive article on measuring fertility change, see Seltzer [1970].) These difficulties should be reduced somewhat by certain elements of our system such as the frequent (every four months) checks on the status of what should be a very large portion of all persons practicing family planning in the program area.

Accurate estimation of the return on incentive payments is quite complex. Introduction of incentive payments into a system changes the relationships among all other inputs and their net productivities. Furthermore, the net value product of clients' incentives is affected by past and present levels of utilization of all other inputs. (Net value product and net productivity mean the net addition to the system's output [births prevented] as a result of increasing a specified input, such as incentives, and none other.)

In order to meaningfully assess the total return from investment in the system, the different inputs and the outputs must be defined and measured unambiguously with reliability and continuity. For example, it is necessary to prorate the cost of those inputs, such as medical personnel, that are used jointly by the proposed system and by other operations like government curative health services. Attention must also be given to fixed overhead costs and to foreign aid, both technical and financial, as inputs to the program.

Rigorous estimation of births prevented is complex and involves many uncertainties, especially in developing na-

* Several persons have published estimates of the value of preventing a birth under particular economic conditions. The estimate of $180 for Pakistan is about twice the current Pakistan per capita income. This estimate is suggested by the recent work of Stephen Enke and Richard Zind (1969), using a dynamic demographic-economic model of a typical less-developed country. Another economist, however, gives evidence that the value of a birth prevented in Pakistan may be much higher: in a study of India, Simmons (1971) felt the best estimate of the current marginal value of a birth prevented during a 20 percent to 30 percent reduction in fertility was Rs. 7800 or about 14 times India's per capita income in 1967-1968.

tions. Accurate estimates require a variety of data that are difficult to obtain and if obtained, are usually unreliable (Seltzer, 1970; Potter, 1969; Bean and Seltzer, 1968; Ross, Stephan, and Watson, 1969; Mauldin, 1967; Byung and Isbister, 1966). William Seltzer (1970) has even suggested that the uncertainties are so great that the estimates should not be made at all. It is the authors' opinion, however, that in the proposed system the estimates of births prevented are justified. The uncertainties in the estimates can be fairly reflected by stating estimates of both births prevented and rates of return in terms of ranges. Furthermore, estimates of births prevented will (or should) be necessary to obtain and maintain government support of the system, because estimating the rate of return from the system is necessary to compare the value of the system to the value of competing development programs. Although the estimate of the rate of return may be very uncertain, it should be remembered that the uncertainties in estimating the rates of return for many other developmental programs are equally great. Finally, some creditable estimates of births prevented have been made recently (Chang, 1969; Haynes, 1969; Lee and Isbister, 1966).

With respect to components of the system's rate of return other than births prevented, there are indirect costs and benefits of the system that should be measured. For example, the new cash flows into the economy via the incentive payments should have desirable effects on both the micro and macro levels by increasing the monetized (versus barter) sector of the economy. At the same time, there may be some inflationary effects.

Partition of the System

All parts of the proposed system or any other family planning program have important interrelationships and interactions. As a result, the merits of any one part such as monetary incentives cannot be viewed in the abstract. Whether monetary incentives to women who prevent births can work depends in this proposal not only on the amount of the incentive but on how the rest of the system affects the quality of contraceptive services, the population's perception and valuation of those services, and the service personnel's conception of what efforts in their work are in their best interest—for example, emphasis on continuation rates. In short, the authors feel that pilot trials would show that the proposed client monetary incentives are a more profitable investment as part of the proposed system than as additions to family planning programs as they now exist in countries like India and Pakistan.

Cost of the System

Our proposed system may be expensive relative to some existing family planning programs. It is not meaningful, however, to compare our system to most existing programs. The proposed system is neither necessary nor appropriate for nations where the goal of the family planning program is only a modest reduction in the birth rate. Other less complicated systems can probably achieve modest goals at less cost. On the other hand, these less costly systems are incapable of ever achieving more ambitious goals. The fertility reduction goals in many nations are *not* modest. It may be possible to use a simple system and spend only $20 per birth prevented when reducing the birth rate in a given country from 50 to 40. But to reduce the birth rate in the same country from 40 to 20 will require a different and perhaps more complicated system that may cost $100 per birth prevented. Speed in achieving a fertility decline also merits a higher cost per birth prevented.

When a country's fertility rate has declined substantially without the use of incentives, the cost of using the proposed system to prevent *additional* births will be high. The cost will be high because: (1) relatively large incentive payments may be necessary to motivate additional women to adopt contraception; and (2) a relatively large number of women will have to receive payments per additional birth prevented, because many women who are eligible for payments will have already adopted contraception, and their continued practice will not prevent additional births. A modification of the eligibility requirements in the proposed system, however, could reduce this cost.

It was observed in a recent report on the national family planning programs of Korea and Taiwan that: "Both countries have become increasingly aware that, to keep the birth rate going down, they must invest more money than before" (Ross, Han, Keeny, and Cernada, 1970).

Summary and Recommendations

In this paper we have outlined a system of providing family planning incentives and related services. Incentives are given to enhance acceptance rates and continuation rates. There are both direct and indirect incentives for this purpose. The direct incentives are monetary payments to eligible women (married, under age 40, with one or more children) for as long as they avoid having births. Direct incentives also include free or subsidized family planning and MCH services for a limited time period. The indirect incentives are payments to medical personnel of a portion of the prices they charge for providing services. The prices charged are also indirect incentives to the clients to value the services and thereby show high continuation rates. Service statistics are designed to give direct measures of system inputs and outputs during specific time periods in terms of births prevented and cost per birth prevented.

Whether on balance the system's framework of incentives, checks, responsibilities, and chain of command improves on present family planning programs should be tested by pilot projects in several countries simultaneously for periods of at least three years. Field experiments should be designed to test the behavioral assumptions as well as the administrative and financial feasibility of the system. The pilot project population might be limited to families of persons employed in certain institutions, such as government, large public enterprises, or large private industries, in addition to limiting the population by geographical area.* Also, some of the other proposals for improving family planning programs and this paper's proposal are not mutually exclusive. For example, "family planning bonds" that serve as old age security (Balfour, 1962; Ridker, 1969) and non-monetary incentives like free schooling for children in one- or two-child families might be added to the proposed system.

References

Balfour, Marshall C. "A Scheme for Rewarding Successful Family Planners." Memorandum. The Population Council, June 1962.

Barnett, Larry D. "Population Policy: Payments for Fertility Limitation in the United States." *Social Biology* 16, no. 4 (December 1969): 239–248.

Bean, Lee L., and William Seltzer. "Couple Years of Protection and Births Averted: A Methodological Examination." *Demography* 5, No. 2 (1968): 947–959.

* The idea of limiting the trial to families of employees in certain institutions was suggested to the authors by Ronald Freedman of the University of Michigan.

Berelson, Bernard. 1969a. "Beyond Family Planning." *Studies in Family Planning* 1, no. 38 (February 1969): 1–14.

———. 1969b. "National Family Planning Programs: Where We Stand." *Studies in Family Planning* 1, no. 39, supplement (March 1969): 343.

———. ed. 1969c. *Family Planning Programs: An International Survey*. New York: Basic Books.

Bogue, Donald J. 1968. "Progress and Problems of World Fertility Control." *Demography* 5, no. 2 (1968): 539–540.

Byung Moo Lee and John Isbister. "The Impact of Birth Control Programs on Fertility." In *Family Planning and Population Programs*. Edited by Bernard Berelson and others. Chicago: University of Chicago Press, 1966.

Carrera, Hugh A. "Evaluation of Pregnancy Tests." *American Journal of Obstetrics and Gynecology* 105, no. 1 (January 1969): 32–38.

Chang, M. C., T. H. Liu, and L. P. Chow. "Study by Matching of the Demographic Impact of an IUD Program: A Preliminary Report." *The Milbank Memorial Fund Quarterly* 47, no. 2 (April 1969): 137–157.

Department of Economics, The Pennsylvania State University. "A Cost-Effectiveness Analysis of Selected National Family Planning Programs." A Report on Phase II of the Penn-USAID Population Project "Cost-Benefit and Cost-Effectiveness Evaluation of Family Planning Programs" Contract no. AID/csd-1884. (mimeo), University Park, Pennsylvania, December 1969.

Ehrlich, Paul R. *The Population Bomb*. New York: Ballantine Books, 1968 (revised 1971).

Enke, Stephen. "The Economics of Government Payments to Limit Population." *Economic Development and Cultural Change* 8, no. 4, Part 1 (July 1960): 339–348.

Enke, Stephen and Richard Zind. "Effect of Fewer Births on Average Income." *Journal of Biosocial Science* 1, no. 1 (January 1969): 41–56.

Finnigan, Oliver D. "Planning, Starting, and Operating an Educational Incentives Program." *Studies in Family Planning* 3, no. 1 (January 1972): 1–7.

"Governmental Policy Statements on Population: An Inventory." *Reports on Population/Family Planning*. (February 1970): 1–20.

Haynes, M. Alfred, George E. Immerwahr, Aleyamma George, and P. S. J. Nayar. "A Study on the Effectiveness of Sterilizations in Reducing the Birth Rate." *Demography* 6, no. 1 (February 1969): 1–11.

Kangas, Lenni. W. "Integrated Incentives for Fertility Control." *Science* 169 (3952): 1278–1283. September 1970.

Leasure, J. William. "Some Economic Benefits of Birth Prevention." *Milbank Memorial Fund Quarterly* 45, no. 4 (October 1967): 417–425.

Mauldin, W. Parker. 1967a. "Births Averted in Family Planning Programs." *Studies in Family Planning* 1, no. 33 (August 1967): 1–7.

———. 1967b. "Prevention of Illegitimate Births: A Bonus Scheme." Memorandum. The Population Council, August 1967.

Mosley, Wily H., A. K. M. Alauddin Chowdhury, K. M. Ashraful Aziz, M. Shafiqul Islam, M. Fahimuddin. "Demographic Studies in Rural East Pakistan." Pakistan-Seato Cholera Research Laboratory. June 1968.

Naseem, M., I. Farooqui, and G. M. Farooq, "Final Report of the Population Growth Estimation Experiment: 1962–1965." Dacca: Pakistan Institute of Development Economics, July 1971.

Nortman, Dorothy. "Population and Family Planning Programs: A Factbook." *Reports on Population/Family Planning*, no. 7 (June 1971).

Pohlman, E. *Incentives and Compensations in Birth Planning*. Chapel Hill: Carolina Population Center, 1971.

Potter, Robert. "Estimating Births Averted in a Family Planning Program." In *Fertility and Family Planning: A World View*. Edited by S. J. Berhman and others. Ann Arbor: University of Michigan Press, 1969, pages 413–434.

Ridker, Ronald G. 1969. "Synopsis of a Proposal for a Family Planning Bond." *Studies in Family Planning* 1, no. 43 (June 1969): 11–16.

———. 1971. "Savings Accounts for Family Planning, An Illustration from the Tea Estates of India." *Studies in Family Planning* 2, no. 7 (July 1971): 150–152.

Robinson, Warren C. and David E. Horlacher. "Population Growth and Economic Welfare." *Reports on Population/Family Planning*, no. 6 (February 1971).

Ross, John A., Frederick F. Stephan, and Walter B. Watson. *A Handbook for Service Statistics in Family Planning Programs*. New York: The Population Council, 1969.

Ross, John A., Dae Woo Han, S. M. Keeny, and George Cernada. "Korea/Taiwan 1969: Report on the National Family Planning Programs." *Studies in Family Planning* 1, no. 54 (June 1970): 15.

Seltzer, William. 1968. "Benchwork Data for Pakistan: A Review of Summary Estimates Derived from the PGE Experiment." *Research Report No. 66*. Karachi: Pakistan Institute of Development Economics.

———. 1970. "Measurement of Accomplishment: The Evaluation of Family Planning Efforts." *Studies in Family Planning* 1, no. 53 (May 1970): 9–16.

Simmons, George B. *The Indian Investment in Family Planning*. New York: The Population Council, 1971.

Simon, Julian. "Money Incentives to Reduce Birth Rates in Low-Income Countries: A Proposal to Determine the Effect Experimentally." Manuscript. Chicago: University of Illinois, 1968.

Spengler, Joseph J. "Agricultural Development Is Not Enough." Manuscript prepared for Conference on World Population Problems, Indiana University, May 1967, pages 29–30.

Those interested in obtaining the proposal for a pilot trial of this system in Pakistan may write to the authors at:

The Johns Hopkins University
School of Hygiene and Public Health
615 North Wolfe Street
Baltimore, Maryland 21205
U.S.A.

Village Midwives In Malaysia

by J. Y. PENG, NOR LAILY BTE A. BAKAR, *and* ARIFFIN BIN MARZUKI

This paper presents the results of an informal questionnaire administered to village midwives in Malaysia recruited for a training program. Dr. Peng, M.D., D.P.H., is an assistant professor of Population Planning, Center for Population Planning, School of Public Health, University of Michigan, Ann Arbor, Michigan, U.S.A.; Dr. Nor Laily, M.B.B.S., is chief of the Training Division and Dr. Ariffin, M.B.B.S., F.R.C.O.G., is director general of the National Family Planning Board in Kuala Lumpur, Malaysia.

This study was undertaken as part of the continued collaboration between the National Family Planning Board of the Government of Malaysia and the Center for Population Planning of the University of Michigan. Thanks are due to the staff of the National Family Planning Board and the Center for Population Planning for help in collecting and processing data.

Most Malaysian officials in health and family planning agree that kampong bidans, the traditional village midwives, should be used to promote maternal and child health and family planning in rural communities. Although these women have no formal training, they are active and influential in their communities and their participation in these programs would lessen the burden on the rural health staff that will arise from the integration of family planning services into rural health activities. But important questions arise. Are kampong bidans interested in promoting family planning? What functions can they perform? How can they be paid for participating in maternal and child health and family planning services?

To determine their background and their interest in participating in family planning programs, we interviewed 292 bidans using a standard questionnaire. The sample consisted of bidans who were about to attend a three-week training program in health and family planning offered by the Malaysia National Family Planning Program and their responses may not be representative of the attitudes of all midwives in Malaysia. Nonetheless, the findings were encouraging: The bidans expressed positive attitudes toward providing family planning services for married women. Almost none expressed anxiety that government family planning services might interfere with their jobs. Most expressed willingness to participate in the government program.

Background

Role of Midwives in Asia

In Asian countries, particularly in rural areas, village midwives with no formal training play an important role in attending deliveries. In several countries, efforts are being made to integrate these midwives in family planning programs. The governments of India and Pakistan have developed incentive systems to enlist the participation of midwives in maternal and child health and family planning programs on a large scale (*1–5*). In Thailand, village midwives were used to recruit IUD acceptors under an incentive scheme in the Potharam project, in the pioneering stage of the Thai family planning program. By 1968 about 16,000 midwives had been trained for this program with UNICEF assistance (*6*). In the Philippines, in another program with UNICEF support, traditional midwives were trained to assist in provision of maternal and child health services. In Indonesia, plans to enlist midwives' participation in family planning are underway.

The number of traditional midwives, their social and demographic characteristics, their methods, and their attitudes toward family planning are areas in which research is needed to determine how midwives can best contribute to family planning services. A number of countries have conducted studies along these lines, among which are: a rather intensive study on dais in West Pakistan by Gardezi and Inayatullah (*1*); a study in East Pakistan by Croley, *et al.* (*7*); and a study in India by Bhandari covering 50 dais in Najafgarh and Ujwa (*8*).

Role of Midwives in Malaysia

There are an estimated 3,000 traditional village midwives or kampong bidans in rural Malaysia. (Kampong means village and bidan means midwife.) According to a report by the Maternal and Child Health Committee of the National Health Council (*9*) about 174,000 births or 57 percent of all deliveries in 1964 were under medical supervision, e.g., through government hospitals, health center, non-government nursing homes, and clinics at rubber estates and tin mines. The remaining 43 percent of all deliveries were attended by private midwives almost all of whom were kampong bidans. According to the West Malaysian Family Survey conducted in 1966–67, 39 percent of rural and 31 percent of all respondents' last live births were attended by kampong bidans (*10*). Although the Ministry of Health is producing trained midwives and it is expected that in most areas kampong bidans will be replaced by trained midwives in about 20 to 30 years, currently the bidans play an important role in relation to maternal and child health. An issue for the government at present is how to change the kampong bidans' role from attending deliveries in a traditional way to assisting in providing family planning services and to referring mothers to rural health centers for modern maternal and child health services.

Training Program

The Malaysia National Family Planning Program needs to expand its services to rural areas. The first step in this expansion will be to integrate family planning services with maternal and child health activities in rural health units (now under the Ministry of Health). The second step will be to utilize kampong bidans to recruit acceptors and to distribute contraceptives in remote areas where rural health facilities do not exist. Toward this aim, the National Family Planning Board started training kampong bidans in January 1969 with UNICEF support. In each state bidans were selected for the training by the nursing sister, the highest administrative person in nursing at the state level. Candidates were selected from among those traditional midwives who were known by the State Health Department and who said that they could come for training. While the process was not random selection, it is believed that the respondents were representative of the ethnic composition and economic condition of their respective states. In general, more active and senior bidans were chosen. They were trained at the general hospital at each state capital for three

weeks. Training consisted of one week in the maternity ward, one week of instruction on family planning, and one week of practical training at the local health center. Between January 1969 and December 1970, 363 bidans were trained.

Interview

Method

Information was obtained by interview with the kampong bidans at the time they came to report for training. This report deals with results of interviews conducted between January 1969 and December 1970. Two groups were not interviewed and the interview forms of one group were lost in the mail on the way to the headquarters so that 292 completed interviews were received.

The questionnaire form we designed and used contained questions covering social and demographic characteristics of respondents, the history, nature, and scope of their services, and questions on the bidans' attitudes toward family planning and their willingness to participate in a family planning program. The interviews were conducted by nursing sisters or staff nurses of the National Family Planning Board.

Because interviews were conducted in different locations and over a period of time, it was not possible to maintain close supervision of the interviewers for the duration of the study. Some respondents were not asked all the questions on the original questionnaire, and we have noted in the text the number of respondents for each question.

Results

Aspects of the general background of the bidans, by state, are shown in Table 1. All but four of the 292 bidans interviewed were Malay. Their mean age was 47.3, ranging from 20 (Johore) to 71 (Perlis). About 84 percent (244) of the bidans were over 40. About 73 percent (213) were currently married, 18 percent (52) widowed, 8 percent (23) divorced or separated, and 1 percent (4) never married.

Eighty percent (233) had had no schooling, 18 percent (53) had only one to five years education, and 1 percent (4) had six to seven years education.

Of the husbands of the currently married, 73 percent (157) were seasonal or unskilled workers. Fifteen percent (32) were unemployed or not working, and 11 percent were semi-skilled and skilled workers, including a few office workers and uniformed personnel.

Of all the bidans interviewed, 43 percent (125) had practiced less than 10 years, 32 percent (94) between 10 and 20 years, 21 percent (62) between 20 and 30 years, and 4 percent (11) more than 30 years.

When asked who taught them to deliver babies, 27 percent (80) said their grandmother; 22 percent (64) their mother; 8 percent (23) an aunt; 5 percent (14) a friend; 2 percent (6) mothers-in-law; 6 percent (18) a combination of mother, grandmother, aunt, in-laws and relatives; and 30 percent (86) other sources.

Two questions were asked about the number of deliveries attended by kampong bidans: "How many deliveries have you actually attended during the last month?" and "How many deliveries have you attended during the past year?" On the average, each kampong bidan reported attending three deliveries during the past month and 26 deliveries during the past year (Table 1). Those kampong bidans with more than ten years of practice had the higher average number of deliveries attended (Table 2).

When asked "How much do you charge for attending each delivery?", the average charge reported by the bidans was 5.4 Malay dollars (about US$2.00) per delivery (see Table 1). Charges varied from one to 25 Malayan dollars (US $8.00). Fifty-three bidans said that they received money but did not cite the amount. No information was ascertained from 27 bidans. In a breakdown by state, the amount of money received for each delivery was relatively high in Malacca, Penang, Selangor, Johore, and Kedah. In states on the east coast such as Kelantan, Trengganu, and Pahang the amount was relatively low. This is consistent with the fact that the states on the east coast are economically disadvantaged.

TABLE 1. *Mean Age, and Characteristics of Roles of Bidans by State*

State	Number interviewed	Mean age	Mean number of deliveries		Average amount received per delivery[a]
			Last month	Past year	
Johore	13	47.7	5.5	33.4	8.0
Kedah	36	48.3	2.4	23.5	7.9[b]
Kelantan	49	45.7	3.7	28.4	2.8
Malacca	7	44.4	2.3	54.8	15.7
Neg. Sembilan	18	44.7	1.6	7.2[b]	7.1[b]
Pahang	66	44.5	3.4	15.7	5.6[b]
Penang	7	42.0	2.3	19.1	12.3[b]
Perak	19	48.0	4.9	55.8	6.6[b]
Perlis	14	54.9	2.2	25.1[b]	N.A.
Selangor	4	45.8	7.5	75.7	10.5
Trengganu	59	50.8	3.4	26.0	3.8
Total	292	47.3	3.3	26.1	5.4

[a] In Malay dollars. US$1.00=M$3.00.
[b] Figures exclude 53 bidans who said they received money but did not cite the amount, and 27 bidans from whom no information on payment was ascertained.
N.A.=no answer.

TABLE 2. *Mean Number of Deliveries Attended Last Month and Past Year by Years of Practice*

Years of practice	Number interviewed	Mean number of deliveries	
		Last month	Past year
Less than 5	40	2.1	14.3
5–9	85	3.2	22.3
10–14	42	4.0	30.9
15–19	52	3.0	29.6[a]
20–24	41	3.4	23.7[a]
25–29	21	4.7	36.8
30–34	7	3.4	28.6
35+	4	12.0	87.2
Total	292	3.4	26.2

[a] Figure excludes one to two cases from whom the information was not ascertained.

The bidans were asked the question: "Do you get anything other than cash for your services?Chickens—clothing—other/specify—". For 72 bidans no information was ascertained. Of those whose responses could be ascertained, 79 (36 percent) said they did not receive gifts; 21 (9 percent) received clothes; 4 (2 percent) received chicken; 50 (23 percent) received a combination of chicken, clothing, and other items; 66 (30 percent) received items other than chickens and clothes.

Information was obtained from 267 bidans on the question: "What do you do to the mother other than conducting deliveries? Abortion—— Giving herbs—— Massage—— Other—— specify". Of these respondents 134 (50 percent) said that they performed massages, and 81 (30 percent) performed massages combined with other services. Thirty-three (12 percent) said they did not do anything other than midwifery, and 11 (7 percent) provided services other than massage, e.g., prescribing herbs, and performing abortions. Six bidans mentioned abortion alone or combined with other services. The information was not ascertained from 25 bidans.

When the bidans were asked about the stage of pregnancy at which they first had contact with the mother, 185 (67 percent) said between the seventh and ninth month of pregnancy; 67 (24 percent) between the fourth and sixth month; and 19 (7 percent) at or before the third month of pregnancy. Five bidans answered that they started at an indefinite month, and information was not ascertained for 16.

One hundred and seventeen bidans (40 percent) said that the postpartum care lasted less than one week, and another 40 percent (118) said that they looked after postpartum mothers from one to two weeks. About 18 percent (53) said that they had contact with postpartum mothers between two and seven weeks. Information on postpartum care was not ascertained for four bidans.

One hundred and ninety-eight bidans were asked the question: "Do you approve or disapprove of providing married women with family planning services? Approve—— Disapprove——." Only two disapproved. The following information was also obtained from these 198 bidans:

- One hundred forty-nine (75 percent) knew that the government was providing family planning services.

- One hundred twenty-three bidans (62 percent) had been approached by women about family planning information services during the last three months.

- One hundred and seventy-four (99 percent) said that they were not worried that the government's family planning services would affect their job in conducting deliveries.

- One hundred eighty-eight (95 percent) thought that they could help to promote the government's program by recruiting patients and distributing contraceptives. Ninety-seven of these women (49 percent) said that they could participate in the program without being paid and 96 preferred to receive a commission for distribution of contraceptives.

Although it may be argued that bidans responded in such a positive way under the special circumstances, it is worthwhile to note that almost all the bidans questioned were willing to participate in the government program of providing family planning services to married women. By comparison, a high proportion of Pakistan's dais showed an unwillingness to provide information regarding family planning during the first phase analysis (*1*).

Comment

Given the apparent willingness of kampong bidans in Malaysia to promote maternal and child health and family planning services, important questions remain: (1) how kampong bidans can be utilized; and (2) how kampong bidans can be paid for their participation.

To answer the first question: The bidans can be asked to bring pregnant women to be registered at the rural health center for antenatal, natal, and postnatal care. At the same time, they can be organized to bring women, especially postpartum women, to the health clinic for family planning services. It should be decided whether the bidans should only recruit acceptors or should distribute contraceptives. The best approach might be for bidans to bring women to health clinics for the initial acceptance so that a staff nurse can screen the women for accepting a contraceptive method and fill out a complete acceptance record. The oral is the most frequently used contraceptive in Malaysia. The bidans could resupply the oral acceptors with contraceptives. Under these circumstances, bidans could play an important role in promoting contraceptive continuation in rural areas by providing women with a continuous motivation through their constant contact. Since most of the bidans are illiterate, a special record form should be designed and bidans should be trained to fill out the form to record the resupplying of contraceptives and other important information.

The importance of supervision of kampong bidans by a nurse at the health clinic cannot be overemphasized. The success of the utilization of kampong bidans in rural family planning services will depend greatly on this supervision.

The next important question concerns reimbursement of bidans for participating in family planning services: Is it feasible and advisable to pay bidans? If so, in what form should payment be and what amount? Bidans can be paid with a flat salary type payment, with an incentive scheme alone, or with a combination of both. Salaries and incentives could be combined as follows: Bidans could receive regular salaries for routine activities, visiting individual homes, finding clients, and bringing clients to clinics. For these activities an area covering a suitable size of the population could be designated for each bidan. Incentive payments could be reserved for the continuation of the use of contraceptives by clients. As an alternative, an incentive scheme could be created based on a scale of increase of salary to bidans according to evaluation of their performance by the nursing staff supervisor of the rural health unit. Careful consideration is important in implementing either of these or other proposals.

Integration of family planning services into rural health units was started in Malaysia in early 1971. The attempt to utilize traditional midwives for family planning services is a new venture in the hope that the rural family planning program will be accelerated along with maternal and child health services. Whether or not this effort will be successful remains to be seen.

BIBLIOGRAPHY

1. Hassan N. Gargezi and Attiya Inayatullah, *The Dai Study*, Karachi, The West Pakistan Family Planning Association, 1969.
2. United Nations Advisory Mission, *An Evaluation of the Family Planning Programme of the Government of India*, 1969, paras. 105–109.
3. *Family Planning Scheme for Pakistan, Third Five Year Plan Period, 1965–1970*, Karachi Ministry of Health, Labour and Social Welfare, Government of Pakistan, 1965.
4. S. A. Jafarey, J. G. Hardee, and A. P. Satterthwaite, "Use of Medical-Para-

medical Personnel and Traditional Midwives in the Pakistan Family Planning Program," *Demography* 5, no. 2 (1968).

5. Lee L. Bean, "Pakistan's Population in the 1970's: Certainties and Uncertainties." Paper presented at the meeting of Association of Asian Studies, March 1971, the Population Council.
6. Ministry of Public Health. *Public Health in Thailand.* Bangkok, Thailand, 1968.
7. H. T. Croley, S. Z. Haider, S. Bigum and H. C. Gustafson. "Characteristics and Utilization of Midwives in a Selected Rural Area of East Pakistan." *Demography* 3, no. 2 (1966).
8. V. Bhandari and J. Bhandari. "Indigenous Dais: A Study of 50 Cases." *Family Planning News* 11, no. 2, February, 1970.
9. *A Study of the Maternal and Child Health Service in the States of Malaya.* Maternal and Child Health Committee, National Health Council, Kuala Lumpur, 1965.
10. *Report on West Malaysian Family Survey 1966–1967.* National Family Planning Board, Kuala Lumpur, Malaysia, 1968.

Report of the Swedish Abortion Committee

by CHRISTOPHER TIETZE

Following are a brief review of the Swedish positions on legalized induced abortion over the past three decades and a summary of the recommendations made by the 1965 Committee on Abortion. Christopher Tietze, M.D., is associate director of the Biomedical Division of the Population Council.

Sweden has been a pioneer in the liberalization of abortion laws since 1938. Every major change in legislation has been preceded by the publication of a comprehensive report prepared by a commission or committee, appointed by the government, after giving careful consideration to all aspects of abortion. The earlier reports of such bodies, established in 1934, 1941, and 1950, have become classics in the history of social legislation.

The Abortion Committee of 1934 recommended legalization of abortion on eugenic, humanitarian, and social grounds. The latter type of indication was not accepted by the Swedish *riksdag* which in 1938 authorized abortion to avert a serious threat to the woman's life or health due to disease, physical impairment, or weakness; in cases of pregnancy resulting from rape and other sex offenses; or if either parent was likely to transmit to the expected child inheritable mental disease, mental deficiency, or severe physical defect. These grounds for the legal termination of pregnancy were essentially those proposed in 1962 by the American law in its Model Penal Code which, in turn, has served as the basis for reform legislation in the United States since 1967.

The Swedish Population Commission of 1941 and the Abortion Commission of 1950 did not recommend major changes in the abortion law itself, but devoted themselves primarily to administrative problems and to the prevention of abortion by provision of a variety of social services, by economic benefits to families, and by sex education, including the dissemination of contraceptive information. The *riksdag*, however, enacted amendments to the abortion law in 1946 and 1963, liberalizing it by degrees without changing its basic character.

A new committee was appointed in 1965 with a mandate to consider further liberalization of the abortion law. The report of this committee, published in September 1971 under the title "The Right to Abortion," contains 192 pages of text and 12 appendices, totaling 371 pages.

The committee recommends that the present prohibition of abortion, including self-abortion, be removed entirely from the penal code. However, termination of pregnancy by a physician outside a hospital and all attempts at abortion by lay persons, other than the pregnant woman herself, shall remain prohibited under the proposed abortion statute.

The committee further recommends that every woman who is a resident of Sweden shall be entitled to have her pregnancy terminated (1) if it can be assumed that her health will be threatened or her strength seriously reduced by a continuation of pregnancy, or (2) if it can be assumed that the child to be born would suffer from a severe illness or defect, or (3) if "for another reason it is an unreasonable hardship for her to continue her pregnancy." The broad language of this last clause is intended to cover a wide variety of reasons, including multiparity, advanced age, immaturity, economic difficulties, various situations of conflict, and other personal reasons. The report makes it clear that the committee feels that a woman's request to have her pregnancy terminated should ordinarily be approved unless there are significant medical or psychological contraindications.

The committee, rejecting the notion that termination of pregnancy should be made available "on demand," recommends that a Swedish woman's right to a surgical termination of pregnancy shall be determined by boards to be established at all obstetrical-gynecological departments of hospitals. Each board shall consist of an obstetrician-gynecologist who acts as the chairman, a psychiatrist, and a lay member. Most applications for abortions by women who are less than three months pregnant should be approved by the obstetrician-gynecologist on his own responsibility. Doubtful cases and all cases involving second trimester pregnancies are to be decided by a majority of the board. Any rejection of a request for termination of pregnancy shall be automatically referred to the Central Social Board in Stockholm for final decision.

All abortions shall be performed in public hospitals and other approved facilities at public expense, as early as possible, and by the least traumatic procedure. The committee also recommends that a wide range of existing welfare measures be strengthened and new services, including public family planning services, be established in order to improve the social and economic security of women and to make it possible for both parents to combine the care of the child with their obligations in other fields of life.

THE POPULATION COUNCIL

245 Park Avenue, New York, New York 10017

The Population Council is a private nonprofit organization established in 1952 for scientific training and study in population matters. It endeavors to advance knowledge in the broad field of population by fostering research, training, and technical consultation and assistance in the social and biomedical sciences.

John D. Rockefeller 3rd,
Chairman of the Board of Trustees
Bernard Berelson, *President*